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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/435,668	11/08/1999	KEITH WAYNE GOOSSEN	GOOSSEN-80	5527

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EXAMINER

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JACKSON, CORNELIUS H

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/435,668

Applicant(s)

GOOSSEN, KEITH WAYNE

Examiner

Cornelius H. Jackson

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

~~Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed~~
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement

1. Acknowledgment is made that applicant's Response, filed on 19 February 2004, has been entered. Claims 1-4 and 6-12 are now pending.
2. The finality of the rejection of the last Office action is withdrawn to be fair and give the Applicant time to properly response to the rejection presented, since the Examiner no longer agrees with the arguments presented by the Applicant during a telephone interview on 08 December 2003.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Park (5524092). Park discloses a metal capped mirror **Fig. 2**, comprising a stack of dielectric layers **12 and 13** of alternating high and low indices of refraction capped with a layer of metal **11**, the improvement comprising a layer **12** consisting of tin oxide to which the metal capping layer **11** is directly adhered.

Regarding claim 2, Park discloses at the end of the stack comprising an integral number of pairs of dielectric layers, **see Figs. 1 and 2.**

Regarding claim 3, Park discloses all of the stack layers other than the end layer of tin oxide are materials other than tin oxide, **see col. 5, lines 5-21.**

Regarding claim 4, Park discloses the tin oxide layer is one of a pair of dielectric layers disposed at the stack end, **see Fig. 1.**

Regarding claims 6-8, Park discloses all the stated limitations.

Regarding claims 9-10, Park discloses the metal is of gold, **see col. 4, lines 14-19 and col. 4, lines 54-59.**

Regarding claims 11-12, Park discloses all the stated limitations, **see Figs. 1 and 2.**

5. Claims 1-4, 7, 8, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokito et al. (5780174). Tokito et al. disclose a metal capped mirror **Fig. 1**, comprising a stack of dielectric layers **12** of alternating high and low indices of refraction capped with a layer of metal **22**, the improvement comprising a layer **14** consisting of tin oxide to which the metal capping layer **22** is directly adhered.

Regarding claim 2, Tokito et al. disclose at the end of the stack comprising an integral number of pairs of dielectric layers, **see Fig. 12.**

Regarding claim 3, Tokito et al. disclose all of the stack layers other than the end layer of tin oxide are materials other than tin oxide, **see col. 5, line 50-col. 6, line 13.**

Regarding claim 4, Tokito et al. disclose the tin oxide layer is one of a pair of dielectric layers disposed at the stack end, **see Fig. 12.**

Regarding claims 7-8, Tokito et al. disclose all the stated limitations, **see Figs. 1 and 12 and col. 5, line 50-col. 6, line 13.**

Regarding claims 11-12, Tokito et al. disclose all the stated limitations, **see Fig.**

1.

Response to Arguments

6. Applicant's arguments filed 12 December 2002 and 19 February 2004 have been fully considered but they are not persuasive.

Applicant argued the following:

a. Indium tin oxide is an indium oxide doped with tin oxide and as such, indium tin oxide is indium oxide with impurities of tin oxide. Tin oxide is not a conductive material, and in the Applicant's claimed mirrors, does not function as a conductor.

b. The use of the indium tin oxide layer in Park does not anticipate or disclose the use of the claimed tin oxide of the Applicant's invention.

c. The Park reference fails to teach or disclose the invention as recited in claim 1, in particularly "a layer consisting of tin oxide".

d. to support the 102(b) rejection, the Examiner cites information contained in Hebrink and Bandettini. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

e. The mere fact that a prior art structure could be modified to produce the claimed invention would not have made the modification obvious unless the prior art suggested the desirability of the modification.

f. Indium tin oxide disclosed in Park cannot replace the substantially pure tin oxide of the present invention.

g. Park does not disclose a mirror having a stack of dielectric materials of alternating high and low indices of refraction.

In response to Applicant's arguments:

a. Tin oxide is a conducting material, **see Hebrink et al. (6449093), col. 14, lines 38-44 as well as many other references.**

b. Park uses indium tin oxide as an example of a common oxide used, so that one skill in the art at the time the invention was made would know the type of material that maybe used, **see Bandettini et al. (5959762), col. 7, lines 42-44.**

c. As Applicant stated, indium tin oxide is an indium oxide doped with tin oxide; therefore, the indium tin oxide layer consists of tin oxide. Claim 1 should recite "a layer consisting essentially of tin oxide".

d. Hebrink was only used to show the fact that tin oxide has conductive properties, while Bandettini was used only to show what was well known to be a common oxide in the art at the time the invention was made. Even without the additional references, Park discloses the invention as claimed. Note that, in some circumstances, it is permissible to use multiple references in a 35 U.S.C. 102 rejection. See MPEP § 2131.01.

e. The Examiner is not relying on the modification of the invention of Park, since Park discloses the claimed invention. But the mere fact that a prior art structure could be modified to contain a layer consisting essentially of tin oxide would have been an obvious the modification since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

f. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the substantially pure tin oxide) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

g. Although the alternation of refractive indices of layers 13 and 14 (in Figure 2) is not serial or more than once, it is inherent that the indices of refraction alternates between the two layers from high to low.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

Art Unit: 2828

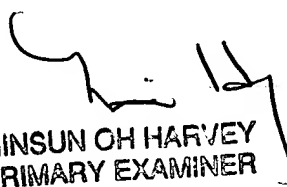
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MINSUN OH HARVEY
PRIMARY EXAMINER